

REMARKS:

The claims pending in the application are 1-20.

By way of this amendment, the term “optionally” has been deleted from Claim 1. Accordingly, Claim 1 as amended, requires that the composition comprises one or more N-methylol functional resin(s), as well as, a hydroxyl-functional phosphorus ester containing at least two phosphorus atoms therein, a melamine-formaldehyde resin *and a curing catalyst*. Support for this amendment can be found in the claims as originally filed, and in particular, in Claim 1 as originally filed, and in page 3, lines 10-15 of the specification. Indeed, as stated in the Office Action, the specification clearly states that the curing catalyst is a mandatory component of the composition. No new matter has been added.

In the Office Action, Claims 1-3, 5-6, 8-11, 15-18 and 20 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,639,096 to Wright (“Wright”) in view of U.S. Pat. No. 4,335,178 to Fearing (“Fearing”). In particular, the Examiner, while acknowledging that Wright fails to teach the addition of a hydroxyl-functional phosphorus ester containing at least two phosphorous atoms therein, has nevertheless concluded that it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Wright to use the phosphorus ester of Fearing in the composition of Wright to arrive at the present invention. However, as demonstrated hereinbelow, if Wright were modified to include the phosphorus ester of Fearing, Wright would be rendered unsatisfactory for its intended

purpose(s). Accordingly, there can be no suggestion or motivation to make the modification proposed by the Examiner since doing so would destroy the Wright invention.

Wright is directed to a wrinkle resistant composition used to treat fabric. As stated in the 1.132 Declaration of Dr. Jeffrey K. Stowell pursuant to 37 C.F.R. § 1.132 annexed hereto, the mechanism for chemical modification of cotton by melamine formaldehyde and DMDHEU type resins to produce a wrinkle-resistant or durable press finish are well known in the art. (Stowell Declaration, page 3, paragraph 8). Specifically, this is accomplished by cross-linking between the melamine formaldehyde and DMDHEU to the hydroxyl groups on the cotton fabric, thereby preventing wrinkles.

The durability of a hydroxyl-functional flame retardant is dependent on using that same resin molecule (melamine formaldehyde and DMDHEU) cross-linked to a cotton hydroxyl group. (Stowell Declaration, page 2, paragraph 6). Therefore, if a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein were introduced into the composition in Wright, it would compete with the hydroxyl groups on the fabric, which prevents cross-linking between the melamine formaldehyde and DMDHEU to the hydroxyl groups on the cotton fabric. (Stowell Declaration, pages 3-4, paragraph 9). In that the cross-linking between the melamine formaldehyde and DMDHEU to the hydroxyl groups on the cotton fabric is critical to preventing wrinkles in fabric, reacting a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein with the composition of Wright would

severely degrade, if not eliminate, any wrinkle resistant properties. (Stowell Declaration, page 4, paragraph 9). Accordingly, adding a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein would destroy the inventive objective of the Wright finishing system, which is directed to a wrinkle resistant composition used to treat fabrics. (Stowell Declaration, pages 3-4, paragraph 9).

Accordingly, one skilled in the art would not add hydroxyl-functional phosphorus esters containing at least two phosphorus atoms therein to the Wright formulation since, as stated at page 4, paragraph 10 of the attached declaration of Dr. Jeffrey K. Stowell pursuant to 37 C.F.R. § 1.132, doing so would render Wright unsatisfactory for its intended purpose. Indeed, the addition of a hydroxyl-functional phosphorus ester containing at least two phosphorous atoms therein to composition in Wright would cause the hydroxyl-functional phosphorus ester containing at least two phosphorous atoms therein to cross-link with cotton hydroxyl groups, rather than promoting cross-linking between the melamine formaldehyde and DMDHEU to the hydroxyl groups on the cotton fabric hydroxyl groups located on different parts of the cotton fibers. (Stowell Declaration, page 4, paragraph 10). In that wrinkle-resistant finishes are given their properties by promoting cross-linking between the melamine formaldehyde and DMDHEU to the hydroxyl groups on the cotton fabric hydroxyl groups located on different parts of the cotton fiber, adding a hydroxyl-functional phosphorus ester containing at least two phosphorous atoms therein would not

produce a finish possessing the desired wrinkle-resistant properties. (Stowell Declaration, page 4, paragraph 10).

“If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” MPEP 2143.01; quoting *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). For this reason alone, it is respectfully requested that the rejection of Claims 1-3, 5-6, 8-11, 15-18 and 20 under 35 USC § 103(a) over Wright in view of Fearing be reconsidered and withdrawn.

Moreover, it is respectfully submitted that Wright, which involves a wrinkle resistant composition used to treat fabric, actually teaches away from adding a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein, as doing so would cause competitive reactions between the two different additions. That is, as stated above, adding hydroxyl-functional phosphorus esters containing at least two phosphorus atoms therein to the Wright formulation would cause a competitive reaction for the hydroxyl groups of the cotton fabric and reduce cross linking and would not result in a composition that will impart wrinkle resistant properties in fabric. It is respectfully submitted that Wright, which involves a wrinkle resistant composition used to treat fabric, teaches away from the addition of any component that would frustrate the ability to prevent wrinkles in fabric, including the hydroxyl-functional phosphorus esters containing at least two phosphorus atoms therein of the present invention. Accordingly, for the reasons stated above, it is respectfully

requested that the rejection of Claims 1-3, 5-6, 8-11, 15-18 and 20 under 35 USC § 103(a) over Wright in view of Fearing be reconsidered and withdrawn.

Similarly, in the Office Action Claims 4 and 19 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Wright in view of Fearing (“Fearing”) and U.S. Patent No. 3,746,572 to Weil et al. As stated above, adding a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright would destroy the inventive purpose of Wright. As such, there is no suggestion or motivation to add a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright. In view of the foregoing and in view of the fact that Fearing and Weil et al., either alone or in combination, fail to correct the factual defects of Wright, the combination of Wright, Fearing and Weil et al. fails to teach or suggest a composition as recited in Claims 4 and 19. Accordingly, it is respectfully requested that the rejection of Claims 4 and 19 under 35 USC § 103(a) over Wright in view of Fearing and Weil et al. be reconsidered and withdrawn.

In the Office Action Claims 7, 12 and 14 have been rejected under 35 USC § 103(a) as allegedly being unpatentable over Wright in view of Fearing, Wu et al. “Comparison of Different Organophosphorus Flame Retardant Agents for Cotton,” Polymer Degradation and Stability 92 (2007) 363-369 (“Wu”), and EP 0 138 204 A1 to Fesman et al. (“Fesman”). As stated above, adding a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright would destroy the

inventive purpose of Wright. As such, there is no suggestion or motivation to add a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright. In view of the foregoing and in view of the fact that Fearing, Wu and Fesman, either alone or in combination, fail to correct the factual defects of Wright, the combination of Wright, Fearing, Wu, and Fesman fails to teach or suggest a composition as recited in Claims 7, 12 and 14. Accordingly, it is respectfully requested that the rejection of Claims 7, 12 and 14 under 35 USC § 103(a) over Wright in view of Fearing, Wu and Fesman be reconsidered and withdrawn.

In the Office Action Claim 13 has been rejected under 35 USC § 103(a) as allegedly being unpatentable over Wright in view of Fearing, Weil et al., Wu, and Fesman. As stated above, adding a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright would destroy the inventive purpose of Wright. As such, there is no suggestion or motivation to add a hydroxyl functional flame retardant phosphorus ester containing at least two phosphorus atoms therein to the composition of Wright. In view of the foregoing and in view of the fact that Fearing, Weil et al., Wu and Fesman, either alone or in combination, fail to correct the factual defects of Wright, the combination of Wright, Fearing, Weil et al., Wu, and Fesman fails to teach or suggest a composition as recited in Claim 13. Accordingly, it is respectfully requested that the rejection of Claim 13 under 35 USC § 103(a) over Wright in view of Fearing, Weil et al., Wu and Fesman be reconsidered and withdrawn.

In view of the forgoing amendment and accompanying remarks, it is respectfully submitted that all claims pending herein are in condition for allowance. The Examiner is respectfully invited to contact the undersigned attorney should there be any questions. Early and favorable consideration of the case is respectfully requested.

Respectfully submitted,



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